mentary steps of sending an input/output command and any related data to removable memory **354** and subsequently receiving a corresponding response from removable memory **354**.

After removable memory driver **411** has performed the requested read/write operation, then removable memory driver **411** reads **968** the current value in powerfail counter **347** to obtain a new current PFCount value. Next, removable memory driver **411** compares **970** the new current PFCount value (step **968**) and the previously-saved PFCountL **540** value (step **958**). Removable memory driver **411** determines **972** whether the new current PFCount value and the previously-saved PFCountL **540** value are different.

If the new current PFCount value and the previously-saved PFCountL value are not different, then the read/write operation to removable memory **354** was not interrupted by an intervening power failure and removable memory driver **411** has successfully performed the read/write function as requested. The FIG. **9** process therefore ends. If, however, the new current PFCount value and the previously-saved PFCountL value are different (step **972**), then the read/write operation has been interrupted by an intervening power failure within camera **110**.

If a power failure has intervened, then removable memory driver **411** reads **974** the current contents of powerfail counter **347** to obtain a new current PFCount value and also saves **976** a local copy of the new current PFCount value into Pfail CountL **540** within working memory **530**. In other embodiments, removable memory driver **411** may alternatively store the new current PFCount value obtained in step **968** into Pfail CountL **540**, providing that the step **970** comparison process does not alter or destroy the step **968** PFCount value. Removable memory driver **411** then sets up **978** removable memory **354** for a retry of the requested read/write operation. For example, removable memory driver **411** may issue a reset command to removable memory **354** prior to a retry of the read/write operation. The FIG. **9** process then loops back to step **966** to retry the read/write operation. Steps **966** through **978** preferably repeat until the new current PFCount value and the previously-saved PFCountL value (step **972**) are equal. The FIG. **9** process may then terminate, because the requested read/write operation has been successfully completed without any intervening power failures.

The invention has been explained above with reference to a preferred embodiment. Other embodiments will be apparent to those skilled in the art in light of this disclosure. For example, the powerfail counter **347** of the present invention may be used to record occurrences within computer **118** other than the power failure discussed above in the preferred embodiment. Furthermore, the present invention may readily be applied to devices other than the removable memory **354** discussed in the preferred embodiment. Therefore, these and other variations upon the preferred embodiment are intended to be covered by the present invention, which is limited only by the appended claims.

What is claimed is:

1. A system for preventing damage to media files within a digital camera, comprising:

a power manager for detecting a power failure in said digital camera;

an interrupt handler for responsively incrementing a powerfail counter for incrementally recording the number of instances of power failure following said power failure; and

a memory driver for performing a memory access operation and subsequently evaluating said powerfail counter to determine whether said power failure occurred during said memory access operation;

said memory driver repeating said memory access operation whenever said memory driver determines that said power failure occurred during said memory access operation.

2. The system of claim **1** wherein said memory driver:

evaluates said powerfail counter prior to performing said memory access operation to obtain a pre-operation value;

evaluates said powerfail counter subsequent to performing said memory access operation to obtain a post-operation value;

compares said pre-operation value and said post-operation value; and

repeats said memory access operation if said memory driver determines that said pre-operation value and said post-operation value are different.

3. The system of claim **1** wherein said interrupt handler registers selected service routines and transmits a notification of said power failure to said registered service routines.

4. The system of claim **1** wherein a processor performs a powerdown sequence to preserve said media files within said digital camera when a power failure is detected.

5. The system of claim **1** further comprising a voltage sensor for monitoring a power supply to provide said power manager with the power supply voltage value.

6. A method for preventing damage to media files within a digital camera, comprising the steps of:

detecting a power failure within said digital camera;

incrementing a powerfail counter for incrementally recording the number of instances of power failure in response to said power failure;

evaluating said powerfail counter before and after performing a memory access operation to determine whether said power failure occurred during said memory access operation; and

repeating said memory access operation whenever said evaluating step determines that said power failure occurred during said memory access operation.

7. The method of claim **6** wherein the steps of evaluating and repeating further include the steps of:

evaluating said powerfail counter prior to performing said memory access operation to obtain a pre-operation value;

evaluating said powerfail counter subsequent to performing said memory access operation to obtain a post-operation value;

comparing said pre-operation value and said post-operation value; and

repeating said memory access operation if said memory driver determines that said pre-operation value and said post-operation value are different.

8. The method of claim **6** further comprising the steps of registering service routines and transmitting a notification of said power failure to said registered service routines using an interrupt handler.

9. The method of claim **6** further comprising the steps of performing a powerdown sequence to preserve said media files within said digital camera when a power failure is detected, whereby data within said digital camera is protected.

10. The method of claim **6** further comprising the steps of monitoring a power supply and responsively providing the power supply voltage value using a voltage sensor.

11. A computer-readable medium comprising program instructions for preventing damage to media files within a digital camera by performing the steps of:

detecting a power failure within said digital camera;

incrementing a powerfail counter for incrementally recording the number of instances of power failure in response to said power failure;

evaluating said powerfail counter before and after performing a memory access operation to determine whether said power failure occurred during said memory access operation; and

repeating said memory access operation whenever said evaluating step determines that said power failure occurred during said memory access operation.

12. The computer-readable medium of claim 11 wherein the steps of evaluating and repeating further include the steps of:

evaluating said powerfail counter prior to performing said memory access operation to obtain a pre-operation value;

evaluating said powerfail counter subsequent to performing said memory access operation to obtain a post-operation value;

comparing said pre-operation value and said post-operation value; and

repeating said memory access operation if said memory driver determines that said pre-operation value and said post-operation value are different.

13. The computer-readable medium of claim 11 further comprising the steps of registering service routines and transmitting a notification of said power failure to said registered service routines using a interrupt handler.

14. The computer-readable medium of claim 11 further comprising the steps of performing a powerdown sequence and a subsequent restart sequence after detecting said power failure, whereby said media files within said digital camera are protected.

15. The computer-readable medium of claim 11 further comprising the steps of monitoring a power supply and responsively providing the power supply voltage value using a voltage sensor.

16. A system for preventing damage to media files within a digital camera, comprising:

means for detecting a power failure within said digital camera;

means for incrementing a powerfail counter for incrementally recording instances of power failure in response to said power failure;

means for evaluating said powerfail counter before and after performing a memory access operation to determine whether said power failure occurred during said memory access operation; and

means for repeating said memory access operation whenever said means for evaluating determines that said power failure occurred during said memory access operation.

17. The system of claim 16 wherein said means for evaluating and repeating further include means for:

evaluating said powerfail counter prior to performing said memory access operation to obtain a pre-operation value;

evaluating said powerfail counter subsequent to performing said memory access operation to obtain a post-operation value; comparing said pre-operation value and said post-operation value; and

repeating said memory access operation if said memory driver determines that said pre-operation value and said post-operation value are different.

18. The system of claim 16 further comprising means for registering service routines and transmitting a notification of said power failure to said means for registering service routines.

19. The system of claim 16 further comprising the means for performing a powerdown sequence and a subsequent restart sequence after detecting said power failure, whereby said media files within said digital camera are protected.

20. The system of claim 16 further comprising means for monitoring a power supply and responsively providing the power supply voltage value using a voltage sensor.

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